

Remark

Applicants respectfully request reconsideration of this application as amended. Claims 1, 11, 24, 29, 30 and 36 have been amended. Claims 6-7, 9, 17-19, 23, 25-27 and 35 have been canceled. Therefore, claims 1-5, 8, 10-16, 20-22, 24 and 28-36 are now presented for examination.

Claim Objections

The Examiner has objected to claim 11, stating that it is unclear what the second "collected video information" is in the phrase "a comparator to compare a current state of the collected video information with collected video information". Claim 11 is amended to refer to "the collected video information", a reference to "collect video information" in the previous line.

35 U.S.C. §103 Rejection,

Narayanaswami et al.

The Examiner has rejected claims 1-5, 8, 10-16, 20-22, 24, 28-31 and 35-36 under 35 U.S.C. § 103(a) as being unpatentable over Narayanaswami et al., U.S. Application No. 2003/0011684 A1 ("Narayanaswami"). Narayanaswami is directed to a "watermarking" system to verify authenticity of still digital photographic images. The "watermark" contains information about how, where, and when each image was taken.

There are significant differences between Narayanaswami and the present invention, some of which have already been identified by the Examiner. These include:

- a) Each image carries only data about that image and is not affected by any other images.
- b) Each image also has a separate redundant file against which the watermark can be checked. (0051:II. 5-21)
- c) Neither the watermark, nor the redundant file are ever changed.
- d) The check against the watermark is between two identical sets of information that are supposed to describe the same frame or image, not successive images.
- e) The result of the check appears to be a "fraudulent" or "not fraudulent" result. There is no suggestion to store the differences, nor is there any reason to.

Referring now to Claim 1, it has been amended to make it easier to understand that the accepted video information corresponds to the data for one video frame, while the "current state of the video information" corresponds to data for previous video frames. Applicants believe that the scope of the claim is not affected by the amendment but may be rendered a little easier to understand. Claim 1, as amended, recites:

"comparing video information corresponding to data for the accepted video frame with gathered video information regarding previous video frame data..." Narayanswami compares image information in a watermark to image information about the same image in a redundant file.

"determining differential information based on the comparing..." Narayanswami determines whether there is a difference but there is no description of any information that might come out of the process. The result would appear to be no more than a

match/no match result. Match suggests "authenticity verified" and no match suggest "fraudulent image." (see, for example, para. 51, line 25)

"storing the differential information..." Narayanswami does not store the results of the comparison nor would there be any reason to. The purpose in Narayanswami is completely different. Narayanswami only stores the image and the redundant copy of the watermark.

"storing ... as annotations to the video frame data..." Narayanswami does not have any annotations to its images. The first copy of the data is stored as a watermark, embedded in the image. The redundant copy is stored but there is no mention of where it is stored (see para. 0051, compare to para. 0044 relating to the watermark).

The examiner refers in Office action section 4, regarding Claim 1 to a mention in Naraynaswami of computing a location of a camera by reference to a previous position. This section refers only to the conventional operation of accelerometers. The result of this comparison operation is not to store the comparison in the image watermark, but to store the computed absolute position in the image watermark. (See last two lines "so that the position of the camera can be accurately recorded."

It would not be obvious to store the differential information as the examiner suggests because this would serve no useful purpose. If only the differential information were stored, it would not be possible to determine the camera's position without reference to another image. As a result the two images would need to be kept together with some reference to each other. Since the only application in Narayanswami is still images, the other image may not be readily available. Accordingly, there is no motivation to store

the change in camera position and Narayanswami certainly includes no suggestion to do so.

The Examiner carefully provides reasons for rejecting all of the claims and for rejecting most of the claims on the basis of Narayanswami. In order not to distract from the more fundamental issues raised above, these reasons will not be commented on.

However, the rejection of Claim 35 bears some mention. The limitations of Claim 35 have been incorporated into Claim 30 and Claim 30 has been modified for ease of understanding. Narayanswami in paragraphs 48 to 51 does not disclose that the video processing data comprises differential information indicating differences between video processing data for successive video image frames. Note that the video processing data in Claim 30, as amended, is part of a video bitstream. It is at least a part of the annotations of the annotated video bitstream.

In Narayanswami, the latent data of the watermark and of an associated data file are compared, but there is no suggestion in Narayanswami that any noted difference be stored in any way. There is certainly no suggestion that it be combined with the image data to obtain an annotated bit stream. This is in part because Narayanswami relates only to individual images and not to an annotated video bitstream.

In addition, the rejection of Claim 36 bears some mention. Narayanswami in paragraph 39 does not disclose that "the video processing data is present only for video image frames for which differential information exists." On the contrary "These parameters are generated with each digital image" and "preferably recorded in a header file associated with each digital image." Paragraph 0039 explains that a "user interface/display is also utilized for displaying the mode of the camera," meaning that the

camera will keep track of which parameters should or should not be recorded [based on the mode]." There is absolutely no suggestion of considering a change in camera parameters between images. Paragraph 0039 refers only to a user interface/display for this purpose. There is also no mention of minimizing the processing load of the camera.

35 U.S.C. §103 Rejections

The Examiner has rejected various of the claims also as obvious under 35 U.S.C. § 103(a), however, these rejections do not overcome the shortcomings of Narayanswami mentioned above.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

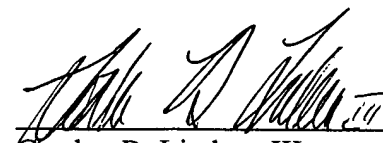
Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Respectfully submitted,

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